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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,557	07/20/2004	Larry G. Tang	PU2229	4556
23454	7590	08/24/2005	EXAMINER	
CALLAWAY GOLF COMPANY 2180 RUTHERFORD ROAD CARLSBAD, CA 92008-7328			HUNTER, ALVIN A	
			ART UNIT	PAPER NUMBER
			3711	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/710,557		TANG ET AL.	
	Examiner		Art Unit	
	Alvin A. Hunter		3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133) Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1,4-8, 10-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/20/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: No support within the specification for having a body ranging from 200 to 1000 grams as set forth in claim 15. .

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-8, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace (USPN 6896625) in view of Solheim (USPN 6375583).

Regarding claim 1, Grace discloses a putter-type club head comprising a body having a front section, an aft section, a heel section, a toe section, and a central section wherein the body has a heel aperture defined by the heel section, central section, front section, and aft section, and a toe aperture defined by the toe section, central section, front section, and aft section, the front section having a face (See Figures 2 and 4). Grace discloses the club head having three mass ports, one in the rear of the club head's central section 31, one along the toe section, and one along the heel section. The primary purpose of the mass ports is to receive weights in order to adjust the moment of inertia of the club head. Grace does not disclose the mass ports within the

Art Unit: 3711

face. Solheim discloses a putter-type club head having weight ports within the face for receiving weights (See Summary of the invention). The purpose of the weights within the face is to evenly balance the weight of the club head. One having ordinary skill in the art would have found it obvious to have the weight ports and weights within any front portion of the club head, particularly the face as taught Solhiem, in order to balance the distribution of the club head's weight. It should also be noted that the club head of Grace has a moment of inertia through the center of gravity of greater than 500 g-cm^2 (See Columns 6 through 7).

Regarding claims 4-8, Grace inherently discloses the weights having a greater density than the material of the body being that the body is made of stainless steel or aluminum and the weights are made of materials such as copper and tungsten. Tungsten has a density of about 19.3 g/cm^3 , copper has a density of about 8.9 g/cm^3 , aluminum has a density of about 2.7 g/cm^3 , and stainless steel has a density of about 7.8 to $8. \text{ g/cm}^3$.

Regarding claim 14, Grace discloses a putter-type club head comprising a body having a front section, an aft section, a heel section, a toe section, and a central section wherein the body has a heel aperture defined by the heel section, central section, front section, and aft section, and a toe aperture defined by the toe section, central section, front section, and aft section, the front section having a face (See Figures 2 and 4). Grace discloses the club head having three mass ports, one in the rear of the club head's central section, one along the toe section, and one along the heel section. The primary purpose of the mass ports is to receive weights in order to adjust the moment of

Art Unit: 3711

inertia of the club head. Grace does not disclose the mass ports within the face. Solheim discloses a putter-type club head having weight ports within the face for receiving weights (See Summary of the invention). The purpose of the weights within the face is to evenly balance the weight of the club head. One having ordinary skill in the art would have found it obvious to have the weight ports and weights within any front portion of the club head, particularly the face as taught Solhiem, in order to balance the distribution of the club head's weight. It should also be noted that the club head of Grace has a moment of inertia through the center of gravity of greater than 500 g-cm^2 (See Columns 6 through 7). Grace also discloses a body composed of an aluminum material having a density ranging from 2.0 to 3.00 g/cm^3 wherein the body has a heel aperture and a toe aperture and at least three mass members positioned within the body wherein each mass is composed of a material having a density of 6 g/cm^3 to 20 g/cm^3 .

Regarding claim 15, Grace discloses a putter-type club head comprising a body having a front section, an aft section, a heel section, a toe section, and a central section wherein the body has a heel aperture defined by the heel section, central section, front section, and aft section, and a toe aperture defined by the toe section, central section, front section, and aft section, the front section having a face (See Figures 2 and 4). Grace discloses the club head having three mass ports, one in the rear of the club head's central section, one along the toe section, and one along the heel section. The primary purpose of the mass ports is to receive weights in order to adjust the moment of inertia of the club head. Grace does not disclose the mass ports within the face.

Art Unit: 3711

Solheim discloses a putter-type club head having weight ports within the face for receiving weights (See Summary of the invention). The purpose of the weights within the face is to evenly balance the weight of the club head. One having ordinary skill in the art would have found it obvious to have the weight ports and weights within any front portion of the club head, particularly the face as taught Solhiem, in order to balance the distribution of the club head's weight. It should also be noted that the club head of Grace has a moment of inertia through the center of gravity of greater than 500 g-cm² (See Columns 6 through 7). Grace also discloses a body composed of an aluminum material having a density ranging from 2.0 to 3.00g/cm³ wherein the body has a heel aperture and a toe aperture and at least three mass members positioned within the body wherein each mass is composed of a material having a density of 6 g/cm³ to 20 g/cm³. The club head of Grace also weight that does not exceed 375 grams and the weights along the toe and heel have a mass of about 10 grams (based on the incorporation by reference of US Application 10/250070). All of the weights are threadably engaged with the body except for the third weight (weight within the trailing end). Grace notes that any type of fastener means can be used to secure the weights. Furthermore, applicant does not noted why it is critical for the third weight to be threadably engaged in order to attain the invention. One having ordinary skill in the art would have found it obvious to employ any type of fastening means, even threadings, in order to secure the weight to the body of the club head.

Regarding claims 16, Grace discloses the first and second weights **32** and **34** having the same mass, but does not disclose the mass of the third weight. Grace

Art Unit: 3711

shows the third weight **30** being of a dimension greater than the first and second.

Furthermore, Grace disclose that the third weight move the center of gravity to the rear of the club head to minimize mis-putts. In order for the center of gravity to be moved to the rear of the club head, the third weight would inherently have to weight more than the first and second. One having ordinary skill in the art would have found it obvious to have the third weight of any mass greater than the first two weights in order to move the center of gravity away from the face to minimize mis-putts.

Regarding claim 17, Grace discloses the masses equidistant from each other.

Regarding claim 18, Grace discloses the first and second weights having the same mass, but does not disclose the mass of the third weight. Grace shows the third weight being of a dimension greater than the first and second. Furthermore, Grace disclose that the third weight move the center of gravity to the rear of the club head to minimize mis-putts. In order for the center of gravity to be moved to the rear of the club head, the third weight would inherently have to weight more than the first and second. One having ordinary skill in the art would have found it obvious to have the third weight of any mass greater than the first two weights in order to move the center of gravity away from the face to minimize mis-putts.

3. Claim 10-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grace (USPN 6896625).

Regarding claim 10, Grace discloses a body composed of an aluminum material having a density ranging from 2.0 to 3.00g/cm³ wherein the body has a heel aperture and a toe aperture and at least three mass members positioned within the body wherein

Art Unit: 3711

each mass is composed of a material having a density of 6 g/cm^3 to 20 g/cm^3 .

Applicant does not set forth why the front to rear length is critical in order to attain the invention. The invention of Grace performs in the same manner as that of the applicant's; therefore, one having ordinary skill in the art would have found it obvious to have the front to rear length of any value so long as the club head provides a high moment of inertia.

Regarding claim 11, Grace discloses the masses equidistant from each other.

Regarding claim 12, Grace discloses the body made of an aluminum alloy.

Regarding claim 13, Grace discloses the weights composed of tungsten and copper.

Regarding claim 20, Grace discloses a body composed of an aluminum material having a density ranging from 2.0 to 3.00 g/cm^3 wherein the body has a heel aperture and a toe aperture and at least three mass members positioned within the body wherein each mass is composed of a material having a density of 6 g/cm^3 to 20 g/cm^3 .

Applicant does not set forth why the front to rear length and the height of the club head are critical in order to attain the invention. The invention of Grace performs in the same manner as that of the applicant's; therefore, one having ordinary skill in the art would have found it obvious to have the front to rear length and the height of any value so long as the club head provides a high moment of inertia.

Allowable Subject Matter

Claim 19 is allowed.

Art Unit: 3711

Claims 2, 3, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AQH
Alvin A. Hunter, Jr.


STEPHEN BLAU
PRIMARY EXAMINER